



**THE DATASHEET OF
SDR0503-270ML**





Features

- Available in E12 series
- Low profile of only 3.3 mm
- High inductance of 15 mH
- RoHS compliant*

Applications

- Input/output of DC/DC converters
- Power supplies for:
 - Portable communications equipment
 - Camcorders
 - LCD TVs

BOURNS®

SDR0503 Series - SMD Power Inductors

Electrical Specifications

| Bourns Part No. | Inductance 1kHz | | Q Ref. | Test Frequency (MHz) | SRF Min. (MHz) | RDC Max. (Ω) | I rms Max. (A) | I sat Typ. (A) |
|-----------------|-----------------|--------|--------|----------------------|----------------|--------------|----------------|----------------|
| | (μH) | Tol. % | | | | | | |
| SDR0503-100ML | 10 | ± 20 | 10 | 2.52 | 30.0 | 0.13 | 1.300 | 1.600 |
| SDR0503-120ML | 12 | ± 20 | 20 | 2.52 | 29.0 | 0.16 | 1.200 | 1.450 |
| SDR0503-150ML | 15 | ± 20 | 20 | 2.52 | 27.0 | 0.19 | 1.050 | 1.260 |
| SDR0503-180ML | 18 | ± 20 | 20 | 2.52 | 24.0 | 0.21 | 0.950 | 1.300 |
| SDR0503-220ML | 22 | ± 20 | 20 | 2.52 | 22.0 | 0.28 | 0.900 | 1.060 |
| SDR0503-270ML | 27 | ± 20 | 20 | 2.52 | 20.0 | 0.32 | 0.800 | 1.000 |
| SDR0503-330KL | 33 | ± 10 | 15 | 2.52 | 18.0 | 0.38 | 0.700 | 0.850 |
| SDR0503-390KL | 39 | ± 10 | 15 | 2.52 | 17.0 | 0.42 | 0.650 | 0.800 |
| SDR0503-470KL | 47 | ± 10 | 20 | 2.52 | 14.0 | 0.60 | 0.600 | 0.750 |
| SDR0503-560KL | 56 | ± 10 | 20 | 2.52 | 13.0 | 0.71 | 0.500 | 0.700 |
| SDR0503-680KL | 68 | ± 10 | 20 | 2.52 | 12.0 | 0.76 | 0.450 | 0.600 |
| SDR0503-820KL | 82 | ± 10 | 15 | 2.52 | 10.0 | 0.88 | 0.420 | 0.520 |
| SDR0503-101KL | 100 | ± 10 | 40 | 0.796 | 9.0 | 1.60 | 0.400 | 0.480 |
| SDR0503-121KL | 120 | ± 10 | 40 | 0.796 | 8.0 | 1.70 | 0.370 | 0.450 |
| SDR0503-151KL | 150 | ± 10 | 40 | 0.796 | 7.0 | 2.00 | 0.330 | 0.400 |
| SDR0503-181KL | 180 | ± 10 | 40 | 0.796 | 7.0 | 2.30 | 0.300 | 0.350 |
| SDR0503-221KL | 220 | ± 10 | 35 | 0.796 | 6.0 | 2.50 | 0.250 | 0.340 |
| SDR0503-271KL | 270 | ± 10 | 35 | 0.796 | 6.0 | 2.90 | 0.230 | 0.280 |
| SDR0503-331KL | 330 | ± 10 | 30 | 0.796 | 5.0 | 3.30 | 0.210 | 0.280 |
| SDR0503-391KL | 390 | ± 10 | 30 | 0.796 | 5.0 | 3.70 | 0.190 | 0.240 |
| SDR0503-471KL | 470 | ± 10 | 30 | 0.796 | 5.0 | 4.90 | 0.180 | 0.220 |
| SDR0503-561KL | 560 | ± 10 | 30 | 0.796 | 4.0 | 5.70 | 0.160 | 0.190 |
| SDR0503-681KL | 680 | ± 10 | 30 | 0.796 | 4.0 | 7.50 | 0.140 | 0.160 |
| SDR0503-821KL | 820 | ± 10 | 40 | 0.796 | 3.0 | 10.00 | 0.120 | 0.155 |
| SDR0503-102KL | 1000 | ± 10 | 40 | 0.252 | 3.0 | 11.50 | 0.110 | 0.135 |
| SDR0503-122JL | 1200 | ± 5 | 40 | 0.252 | 3.0 | 12.00 | 0.063 | 0.090 |
| SDR0503-152JL | 1500 | ± 5 | 40 | 0.252 | 2.0 | 13.00 | 0.059 | 0.072 |
| SDR0503-182JL | 1800 | ± 5 | 40 | 0.252 | 2.0 | 15.00 | 0.055 | 0.070 |
| SDR0503-222JL | 2200 | ± 5 | 40 | 0.252 | 2.0 | 22.00 | 0.053 | 0.070 |
| SDR0503-272JL | 2700 | ± 5 | 40 | 0.252 | 2.0 | 26.00 | 0.050 | 0.070 |
| SDR0503-332JL | 3300 | ± 5 | 40 | 0.252 | 2.0 | 38.00 | 0.045 | 0.062 |
| SDR0503-392JL | 3900 | ± 5 | 40 | 0.252 | 2.0 | 40.00 | 0.042 | 0.060 |
| SDR0503-472JL | 4700 | ± 5 | 40 | 0.252 | 1.0 | 48.00 | 0.040 | 0.050 |
| SDR0503-502JL | 5000 | ± 5 | 40 | 0.252 | 1.0 | 60.00 | 0.039 | 0.050 |
| SDR0503-562JL | 5600 | ± 5 | 40 | 0.252 | 1.0 | 72.00 | 0.038 | 0.050 |
| SDR0503-682JL | 6800 | ± 5 | 40 | 0.252 | 1.0 | 80.00 | 0.034 | 0.045 |
| SDR0503-822JL | 8200 | ± 5 | 40 | 0.252 | 1.0 | 92.00 | 0.030 | 0.045 |
| SDR0503-103JL | 10000 | ± 5 | 30 | 0.0796 | 1.0 | 110.00 | 0.027 | 0.040 |
| SDR0503-123JL | 12000 | ± 5 | 30 | 0.0796 | 1.0 | 148.00 | 0.025 | 0.038 |
| SDR0503-153JL | 15000 | ± 5 | 30 | 0.0796 | 1.0 | 168.00 | 0.020 | 0.032 |

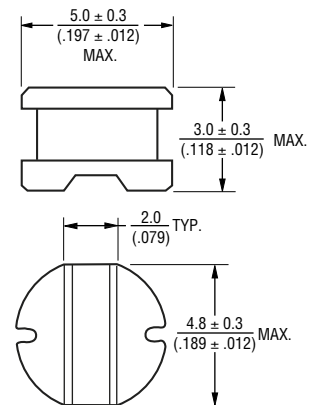
General Specifications

Test Voltage 1 V
 Reflow Soldering 230 °C, 50 sec. max.
 Operating Temperature ... -40 °C to +125 °C
 (Temperature rise included)
 Storage Temperature... -40 °C to +125 °C
 Resistance to Soldering Heat
 260 °C for 5 sec.
 Moisture Sensitivity Level 1
 ESD Classification (HBM) N/A

Materials

Core Ferrite DR
 Wire Enameled copper
 Terminal Ag/Ni/Sn
 Rated Current..Ind. drop 10 % typ. at Isat
 Temp. Rise..... 40 °C max. at rated Irms
 Packaging 500 pcs. per reel

Product Dimensions



Recommended Layout



Typical Part Marking



Electrical Schematic



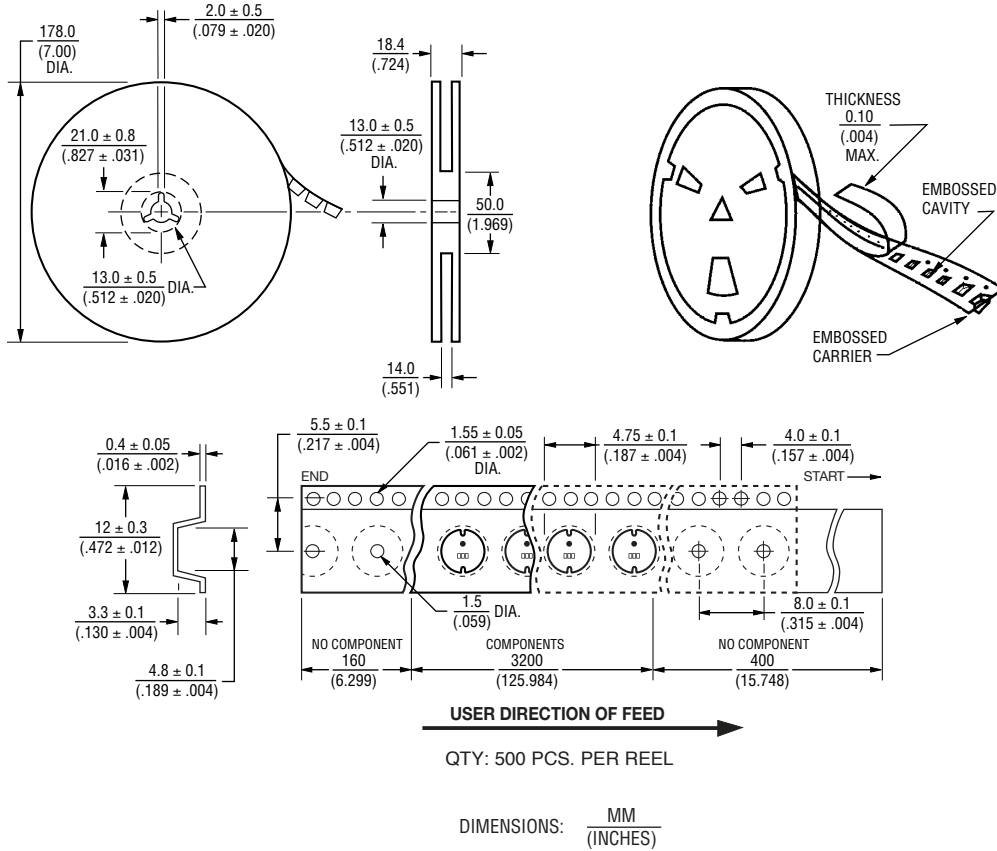
WARNING Cancer and Reproductive Harm
www.P65Warnings.ca.gov

*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.
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SDR0503 Series - SMD Power Inductors

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Packaging Specifications



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-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management